

Claims

1. A method for forming a ferrocapacitor includes the steps of:

depositing a ferroelectric material over an insulating layer;

a first etching step of etching of the ferroelectric material to form
5 openings in it,

depositing an electrode layer into the openings formed in the
ferroelectric layer;

a second etching step, after depositing the electrode layer, of etching
the insulating layer at the bottom of the openings to form gaps in it; and
10 inserting conductive material into the gaps.
2. A method according to claim 1 in which the first etching step leaves a
film of ferroelectric material remaining at the bottom of the openings, and the
film of ferroelectric material is removed during the second etching step.
3. A method according to claim 1 including a step of planarizing the top of
15 the remaining ferroelectric material to a planarization level and depositing an
insulating layer over it.
4. A method according to claim 1 in which the conductive material
substantially fills the openings at least up to the planarization level.
5. A ferroelectric capacitor produced by a method according to claim 1.
- 20 6. A FeRAM device including a ferrocapacitor produced by a method
according to claim 1.